



UNIVERSITY OF SALAMANCA

DEPARTMENT OF SOCIOLOGY AND COMMUNICATION

**Interethnic Contact in Computer-mediated Communication:
Anonymity Effects and Stereotype Disconfirmation on
Prejudice Reduction and Out-group Attraction.
(Shortened version)**

**A Dissertation submitted in partial satisfaction of the
requirements for the Doctoral degree in Audiovisual Communication
by:**

JOSÉ SALVADOR ALVÍDREZ VILLEGAS

Advisor:

Dr. Juan José Igartua Perosanz

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Abstract

The positive effects of intergroup contact have been verified by a variety of research studies. Recently, new proceedings and contexts different from traditional face-to-face contact have been proposed, including the contact that takes place in computer-mediated communication (CMC). This particular channel of communication presents clear advantages over “real” interactions due to its ubiquity, accessibility and multimodal nature. Nevertheless, there is a lack of empirical research in corroborating effects of intergroup contact in CMC. The primary purpose of this thesis study was to verify the impact of CMC-intergroup contact on negative attitudes toward an ethnic minority in Spain. Two studies based on the Social Identity Model of Deindividuation Effects (SIDE), the Social Information Processing (SIP) Theory, and the Intergroup Contact Theory, were carried out. Using a focus group methodology, the first study analyzed what schematic representations of ethnic minority groups exist in Spanish society; while the second study analyzed the impact of a stereotype disconfirming behavior on the negative attitudes toward an ethnic minority group in an experimental CMC setting. The results of the first study indicated that the Latin American group, among other stigmatized minorities, is the most socially accepted ethnic group by members of the Spanish majority due to shared cultural similarities, even though it is commonly associated to illegal immigration: this implies a better intention for contact compared to the worst evaluated minorities, such as gypsies. On the other hand, the second study used a software application so as to simulate a virtual group collaboration in which visual anonymity and disconfirming behavior were manipulated. One Latin American confederate in each group (made up of Spaniards) was instructed to show a stereotype confirming or disconfirming behavior. Participants were depicted by an ostensible photo (personalized condition) or by their national flag (anonymous condition). The analysis revealed that confederates acting in a disconfirming way were more attractive and prototypical than those who confirmed stereotypes; however, contrary to expectations, confirming behavior reduced stereotyped perceptions more than disconfirming behavior. Also, negative attributions were reduced more when confederates behaved in a confirming manner in anonymous groups. Additional tests pointed out a mediating role of perceived attraction towards the Latino confederate in reducing prejudiced beliefs, but only in the anonymous condition; furthermore, perceived prototypicality of the confederate in terms of the local group influenced prejudice reduction more than his disconfirming behavior. Explanations for the obtained results are offered as well as the practical and theoretical implications for this particular line of research.

Keywords: Computer-mediated communication; intergroup contact; social identity; prejudice; attraction

Introduction

Recent perspectives on intergroup contact have focused on the contact that takes place in less traditional settings than face-to-face (FtF) encounters (Crisp, Husnu, Meleady, Stathi & Turner, 2010; Harwood, Paolini, Joyce, Rubin & Arroyo, 2011; Schiappa, Gregg & Hewes, 2005). For Amichai-Hamburger & McKenna (2006) the exclusive features of computer-mediated communication (CMC) represent not only an alternative channel for intergroup contact, but also would offer some advantages over direct meetings (e.g., equal status interactions, accessibility for worldwide users, reduced economic and logistic costs).

In CMC research, two primary theoretical perspectives have analyzed the identity processes that occur when users communicate with peers: the Social Identity Model of Deindividuation Effects (SIDE) and the Social Information Processing Theory (SIP). Whereas SIDE claims that group identity effects stem from the visual anonymity of users, SIP suggests that online communication is based more on interpersonal perceptions than group membership awareness. Although both approaches could provide a solid theoretical framework to predict effects in CMC intergroup contact, SIDE research has been criticized for its inconsistencies in supporting in-group/out-group effects (Walther, 2009); while the SIP orientation usually underestimates the complex social context of intergroup relations in which users communicate with each other (Postmes & Baym, 2005).

In relation to the problem of generalizing the contact effect, one line of research in intergroup contact emphasizes the role of typicality when interacting with individual out-group members who present stereotype disconfirming information (e.g., Kunda & Oleson, 1997; Wilder, 1984): when this individual acts according to a disconfirming behaviour and nevertheless is regarded as a typical member of his/her group, the positive evaluation of this individual group member is generalized to the rest of the out-group (Wolsko, Park, Judd, & Bachelor, 2003). To date, this strategy has not been contrasted empirically in CMC research, and its success would depend to a large extent on the degree of “permeability” of intergroup borders (Klein & Snyder, 2003): if this border is thick or rigid, this type of disconfirming behaviour would be disregarded or could even accentuate in-group/out-group differences.

In this context, the primary aim of this thesis study was to examine the effect of a CMC intergroup contact on the negative attitudes related to an out-group. Two empirical studies were carried out: the first one aims to determine how ethnic minority groups in Spain are socially represented in order to find out which minorities have more possibilities of success, in terms of permeability, when using a disconfirming behaviour strategy; while the second study used an experimental design to test a contact model in a CMC, in which the identifiability of group participants and the communicating behaviour of out-group individual members were manipulated to check their impact on the prejudice experienced toward this out-group and its stereotype variability. In the following sections, a brief review of the literature in the intergroup contact theory and social identity processes in CMC research is provided; then, the design, methodology and results of both studies are presented. Finally, the most significant findings are discussed as well as the limitations in both studies and future directions in this line of research.

Intergroup Contact Literature

Gordon Allport's Contact Hypothesis reported that personal interactions between members of different groups would contribute to a gradual reduction in prejudice against people that do not belong to the in-group, as well as an increased knowledge about the out-group that could challenge the stereotype related to it; therefore, contact would bring about a marked improvement to intergroup relations. However, even in its early conceptualization, Allport warned that contact itself is not enough to produce changes on negative intergroup attitudes, but certain "ideal" conditions must be met to guarantee a successful interaction: *equal status, intergroup cooperation, shared superordinate goals* and *institutional support*. Even if such conditions are not exhaustive, and neither necessary as Pettigrew & Tropp (2006) demonstrated later, they seem convenient to advance a favourable contact. Table 1 shows a brief description of Allport's four original conditions (1954).

Half a century later, Thomas Pettigrew, one of the key authors of reference in contact research, reformulated the original contact hypothesis to upgrade it into a general Intergroup Contact Theory (Pettigrew, 1998). One of the most valuable contributions of this theory is the identification of four interrelated processes that are involved in prejudice reduction: *learning about the out-group, changed behaviour,*

affective ties, and *in-group reappraisal*. Among all these processes, Pettigrew emphasizes affective ties as the most influential factor in predicting contact effects: positive emotions are primary for a successful meeting because they can act as mediators in changing attitudes (Pettigrew & Tropp, 2008). For instance, in an earlier study (Pettigrew, 1997), the results revealed that friendship had a direct, negative impact on prejudice ($r = -.210$).

Table 1. Allport’s optimal conditions for intergroup contact.

Contact conditions	Description
1. Equal status	Interaction between members of different groups must be met in equal status conditions. Perceived status differences generate negative effects (e.g., Jackman & Crane, 1986).
2. Intergroup cooperation	Groups must join efforts in an interdependent way. Sherif (1966) demonstrated that intergroup bias derived from competence could be just reduced by cooperation.
3. Shared superordinate goals	In order to ameliorate bias among group members, they must be oriented towards a superordinate goal. An example of this can be seen in sport teams made up of interracial members (Patchen, 1982).
4. Institutional support	Norms (and penalties) settled by an official authority to regulate group interactions have exerted an important influence in contact success (e.g., Adlerfer, 1982).

Table based in Allport (1954), and reviews by Martínez (2000), Pettigrew (1998), and Pettigrew & Tropp (2006).

On the other hand, there is a line of research that analyzes contact with individual out-group members that present a stereotype disconfirming behaviour (e.g., a member of military forces looking sensitive). This work has registered changes in perceptions of group variability on diverse social groups as a consequence of showing counter-stereotyped information (Brown, Vivian & Hewstone, 1999; Cook, 1984; Desforges, Lord, Pugh, Sia, Scarberry & Ratcliff, 1997; Kunda & Oleson, 1997). However, when disconfirmation is very ostensible or extreme, these instances are regarded as “exceptions” of the group stereotype; they are clustered then into an alternative category that is mentally isolated from the rest of the out-group. This *subtyping* process arises as a form of dealing with new information (atypical group members), but preserves the stereotype as “frozen” or intact (Crocker & Weber, 1983; Kunda & Oleson, 1995). Because of this risk, representativeness is crucial in connecting

the disconfirming individual and the rest of the group: the more typical the member is considered, the lesser his or her chance of being subtyped; and this new information will be assimilated to the group stereotype producing a new general perspective of the group attributes (Deutsch & Fazio, 2008; Rothbart & John, 1985). In Wolsko et al. (2003), the authors designed a contact dynamic for small groups comprising mostly European American participants; one member in each group was a confederate, typical of the Latino minority in the U.S., who behaved in a confirming or disconfirming manner to some Latino's stereotyped attributes (e.g., lazy, religious, strong emotional bonds to their families). Evaluations of the confederate in each condition (confirming/disconfirming) were compared before and after the contact took place. General results showed more favourable perceptions of the Latino group produced by the contact dynamic, but there were no significant differences in assessments of the confederate behaviour; still, mean scores denoted a preference for the disconfirming individual. Additional analysis supported the moderating role of typicality: as long as he behaved in a disconfirming way, and was nevertheless seen as typical of his ethnic group, group variability perceptions increased.

Social Identity Theory (Tajfel & Turner, 1986) holds that stereotype disconfirmation may be used as an individual strategy for *social mobility*, which refers to a personal motivation for “moving” from a socially devaluated or stigmatized group to a more prestigious group, in order to reach a positive social identity. When this motivation is also intended to enact more positive stereotypes about the disadvantaged group and to upgrade its social position, then disconfirmation becomes a collective strategy rather than individual. In any case, the individual upward strategy will only be successful when group boundaries are perceived as permeable or flexible; that is to say, if status differences are thick (e.g., the caste system in India), then a disconfirmation strategy could be ineffective or fail (Klein y Snyder, 2003). Hence, social-structural context where contact takes place must be considered when performing such a strategy for predicting successful outcomes: especially in societies made up of diverse ethnic minorities where permeability between the dominant group and the rest depends, among many complex factors, on how socially desirable a minority group is seen to be (Snellman & Ekehammar, 2005).

Contact in Computer-mediated Communication

In line with research on mediated interpersonal contact (Harwood, 2010; Walther, 2009), sometimes also called *vicarious contact* (Fujioka, 1999), Amichai-Hamburger & McKenna (2006) put forward that computer-mediated communication presents exclusive advantages for intergroup contact over other more traditional encounters: Internet's ubiquity, for example, would ease interactions with groups from diverse cultural, social and geographical backgrounds; thus, this singular feature offers an excellent array of opportunities for contact otherwise impossible in other mediated channels (e.g., Schiappa et al., 2005). Moreover, this kind of communication implies a far lesser investment of economical, logistic, and human resources than in FtF meetings. In addition, researchers point out that CMC is free of the intrinsic social pressure or anxiety that is present in "real" encounters: shy, overweight, lower-class or physically unattractive people may feel more comfortable participating in computer-mediated chats than in direct conversations. Because of this, and some other especial features, CMC can meet most of Allport's original conditions. Table 2 shows a description of how CMC satisfies these optimal conditions.

Harwood (2010) further advanced this and other indirect ways of interaction as degrees within a contact-qualitative gradient that goes from an *imagined contact* (Crisp et al., 2010) through an *extended* (Wright, Aron & Brody, 2008) and a *mediated* one (Ortiz y Harwood, 2007), ending in a face-to-face meeting. The implementation, or "passing" from one system to other would be determined by self-implication and the richness of the interaction with out-group members, CMC being one of the closest channels to FtF interactions. Consequently, contact in CMC could be seen as a preliminary phase to physical contact.

In spite of all the listed advantages Amichai-Hamburger & McKenna's (2006) assertions have not been tested empirically yet, instead, they became a target for some critics (Walther, 2009; Walther y Carr, 2010). In an ironical turn, findings in studies on CMC uncovered transference, or even an increase, of intergroup bias in online interactions (Ellis & Maoz, 2007; Finchilescu, 2010; Glaser & Kahn, 2005; Parker & Song, 2006; Weisband, Schneider & Conolly, 1995). Still, to date no CMC studies have implemented Allport's optimal conditions or any other strategy for prejudice reduction and stereotype change in a strict sense: this is the intention of the present research.

Table 2. Comparison between optimal contact conditions and CMC features for intergroup contact.

Allport's conditions	CMC features
1. Equal status	<i>Anonymity:</i> Unlike FtF interactions, CMC's reduced social cues inhibit emergence of bias derived from perceptions of economic status, race, physical attraction and others. Hence, users may perceive that they communicate in more balanced social conditions (Sproull & Kiesler, 1986).
2. Intergroup cooperation and shared superordinate goals	<i>Synchrony:</i> Both in asynchronous (e.g., email) or real time (e.g., chat) exchanges, international organizations currently manage to form virtual groups comprised by geographically distributed collaborators. In many cases, these long distanced groups show good performances as similar as face-to-face groups (Cascio, 2000).
3. Contact opportunity	<i>Ubiquity:</i> Even though CMC offers a wider range of opportunities for contact, the privacy of communicating at home can be beneficial for interactions when compared to public settings, where stereotype activation is more likely to occur (McKenna y Bargh, 2000).
4. Institutional support and willingness to participate	<i>Control:</i> Supervision of online meetings is easier and less invasive than offline interactions (e.g., a forum administrator). Leaders in academic institutions, for example, could incentive CMC interactions because it is characterised by being lower risk. <i>Bridging the language barrier:</i> Asynchronous CMC allows users to check back their messages as many times as they need for rehearsal: if communicators speak in different languages, they can search for online dictionaries that would help to overcome this difficulty.

Interpersonal and Intergroup Processes in CMC

The theoretical framework for contact predictions in Amichai-Hamburger & McKenna (2006) is mainly based on the Social Identity Model of Deindividuation Effects (Lea & Spears, 1991; Postmes & Baym, 2005) that is used to invoke group effects in CMC; whereas, since each user individually handles his/her own online communication, he/she will be involved in promising interpersonal exchanges that might preclude the development of affective ties. This social-emotion-orientation in CMC research has mainly been guided by the social information processing theory (Walther, 1992). A concise description of each perspective is outlined next.

Social Information Processing Theory (SIP)

This approach is based on social cognition and relational communication in social psychology research. One key assumption in SIP's theory is that users experience

the same relational needs in virtual settings as in offline routines: they actively search for people with the same traits, values and goals in a need to belong, make friends and develop affective relationships. For such purposes, communicators adapt their messages to some CMC features in order to convey “emotional” information. For instance, users make use of *emoticons* (e.g., ☺, ☹, ☹) or *winks* such as “;-)” to substitute facial expressions in FtF interactions. By manipulating specific sorts of typography or abbreviations, people denote cordiality, mood, or intention to reduce ambiguity in conversations (e.g., Walther y D’Addario, 2001). In this matter, other “subtle” resources are employed in virtual contexts to generate and interpret certain interpersonal impressions such as the time of response, the amount of personal information that is disclosed, the quality of self-implication, and the use of a positive or negative lexical verbatim.

Social Identity Model of Deindividuating Effects (SIDE)

The SIDE model was originally introduced as a counterproposal to former accounts of the deindividuation phenomena, in which anti-normative behaviours increased as a result of being embedded in anonymous groups (Kiesler, Siegel & McGuire, 1984); researchers consider CMC in terms of a *depersonalization*, more than a *deindividuation* of online participants. When users in a CMC remain anonymous, and a social identity is salient (i.e., a notion of group is introduced), members’ interpersonal differences tend to be blurred and perceptions of “groupness” increase (the depersonalization effect). As long as the group identity is salient, group norms tend to be too.

The SIDE model is based on the Social Identity Theory (Tajfel, & Turner, 1979) and the self-categorization theory (Turner, 1987). The convergence of both theories posits that, when social identity is more salient than personal identity in an anonymous CMC, people see themselves as members of a given group more than as individuals. Categorization processes lead to a cognitive distinction between in-groups and out-groups, and because of this division, in-group similarities (among members) and intergroup differences will be exaggerated: thus, members will tend to favour the in-group and to dislike out-group members. When members identify with the salient social category (e.g., *men*), they see themselves as identical or interchangeable, and assimilate each other to a group prototype (e.g., “risk-taking” or “sport-lover”). Social

identification and self-categorization in terms of the salient group will lead members to behave according to group norms: this is why the “real effect of CMC then is to increase conformity to those local group norms” (McKenna y Seidman, 2005, p.196).

Attraction in CMC

Research based on the SIDE model has investigated group processes and social effects that take place in online interactions (i.e., minority influence, group polarization, cohesion, linguistic accommodation). One line of research has focused on manipulating visual cues for group identification and attraction to members (e.g., Lea, Spears & de Groot, 2001). Yet, conceptually, attraction differs on its basis and structure as well as SIDE and SIP models differ on their approach to explain and predict attraction outcomes. On one hand, *social attraction* refers to a person’s depersonalized liking for a group as a whole and for its members: the extent of this attraction depends on how closely these members conform to the group prototype (Hogg & Haines, 1996). *Interpersonal attraction*, on the other hand, reflects a positive affection that individual group members experience between them based on their personal, idiosyncratic characteristics and similarities (Byrne, 1971).

According to SIDE, visual anonymity in CMC stimulates social attraction through depersonalization and categorization of the self and others in terms of the local group. Group members become sensitive in comparing themselves to an abstract group prototype, that is, the more group members embody this prototype (i.e., behave or embrace values and goals), the more they feel attracted to each other (Lea et al., 2001). Social attraction in CMC has been verified to exert an important influence for group cohesion (Lea, Spears & Watt, 2007), and conformity to group norms (Lee, 2004). Moreover, “sources of in-group social attraction include not only the immediate group, but also wider social categories, such as gender and nationality, to which group members belong” (Lea et al., 2007, p. 762).

The SIP perspective, on the contrary, argues that interpersonal attraction emerges from relational behaviours that motivated communicators exhibit to manage interpersonal impressions, regardless of whether members are visually anonymous or identifiable. In this regard, the core difference between SIDE and SIP’s assumptions is how interpersonal and intergroup information is cued: SIDE states that, when members’ personal traits are ostensible (e.g., by showing a photo), depersonalization decreases as

much as perceptions of groupness (e.g., Cress, 2005), and therefore, social attraction is reduced (Lea et al., 2001). On the contrary, SIP maintains that physical cues are not that relevant since users adapt their relational self into linguistic cues leading to interpersonal attraction. The experiment of Wang, Walther & Hancock (2009) analyzed both models simultaneously in an intergroup interaction: the authors introduced a confederate in each virtual group who was instructed to exhibit a “likeable” or “dislikeable” communicative behaviour towards the other team members in order to ascertain which processes are stronger for attraction effects (group membership or interpersonal behaviour). The results indicated that interpersonal behaviours provided stronger effects for attraction than did group membership or identification. Because of this divergence, more research on the intervening interpersonal and intergroup processes in CMC is needed. This is especially the case if scholars consider this channel for the improvement of intergroup relations.

Study 1: Schematic Representations of Contact with Minority Ethnic Groups

As mentioned above, the aim of this study is to determine how “permeable” the intergroup borders between a high status group and low status minorities are, in order to better predict the effects of one disconfirmation strategy. Particularly, perceptions in young Spaniards about the type of contact and relationship with different ethnic groups are the focus of this analysis. Since the mid-1990s until 2007, Spain was a host country for immigrant population that came up from other regions of the world; and it has been home of one of the oldest ethnic minorities in Europe as well: the gypsies. Thus, a deeper understanding of how beliefs and expectations for contact with these minorities are rooted in members of the majority Spanish culture would depict a better picture of status differences and social barriers in the context where the contact takes place. Specifically, three main objectives were settled: to examine cognitive representations associated to contact with ethnic minority groups in terms of *schemas* (Harwood, McKee & Lin, 2000); to determine which positions occupy these groups in the veiled social hierarchy built by the dominant culture (as well as the reasons that justify such positions); and to analyze which are the schematic representations regarding the most accepted ethnic minorities in Spanish society.

Contact Schemas

Schemas are cognitive structures that a person has related to him/her self and other persons, groups, objects, events or stimuli; these mental representations are based on experiences and knowledge acquired from living and interacting within a given social-cultural context that shape the perceptions of social information. These structures are very helpful in processing social information in a faster way because of their accessibility (Fiske y Taylor, 1991; Markus, 1977). In this sense, it is pertinent to highlight the study of Harwood et al. (2000) regarding communication schemas: the authors suggest that social knowledge can be organized in person-situation categories, such as an intergroup contact, and behave according to the schematic representation of both the group and the situation. This notion of schema includes trait-based perceptions (stereotypes), affective information, behaviour scripts and expectations of the interaction. Exploring the manner in which schemas related to ethnic groups are structured, will provide this study with richer information of how young Spaniards think, feel, and expect about having contact with people from ethnic minorities.

Context of Intergroup Relations in Spain

Ethnic minority groups grew more numerous in Spain as immigration rates increased (except for the gypsies that have lived in the country since the 15th century). In 2011¹ the foreign population established in Spain consisted mainly of E.U. citizens (40.5%), people from Latin American countries (27.8%), African countries (20.9%), and Asian countries (6.6%); whereas the gypsy population, on the other hand, occupied nearly 1.5% of the overall Spanish population². Although Spain, when compared with other European countries, has traditionally been considered as “tolerant” of diversity, its society is not free from bias in the co-existence between the native population and ethnic minorities. The 2010 report of the Spanish Observatory for Racism and Xenophobia (Oberaxe) put emphasis on the negative impact of unemployment on the Spaniards’ attitudes toward immigration. This factor was reflected in a proliferation of racist speeches and in an accentuation of asymmetric accessibilities to basic social services (e.g., health, employment, or housing) since 2008 (Cea D’Ancona y Valles, 2010).

¹ <http://extranjeros.meyss.es>.

² www.gitanos.org.

Moreover, similar to other multi-ethnic societies, a veiled hierarchy of the ethnic groups exists in Spanish society with the native group at the top; while the rest of the minorities are ranked closer or distanced depending on how socially desirable they are seen to be by this dominant group (Snellman & Ekehammar, 2005). Stereotypes, ethnocentrism, and a fear of losing status by interacting with members of lower status groups play an important role in this rank; however, ethnic minorities with cultural, linguistic or religious similarities are often more appreciated. In two Oberaxe reports within the economic recession context (2009 y 2010), Latin Americans, Africans and Asians were the best-evaluated immigrant groups; whereas groups associated to the Muslim religion (e.g., Moroccans), as well as Rumanians and Gypsies were disliked more. Even though this latter group is not considered “immigrant”, it has been continually segregated to lower positions in the social scale as a consequence of complex historical rivalries (Gamella, 1996).

One relevant factor in generating stereotypical images of immigration and/or ethnic minorities is the way in which the media link these groups to the increase in felony or loss of jobs in Spain; thus, feeding a general perception of threat. In the survey *Attitudes toward immigration*, conducted annually by the Sociological Research Center in Spain (www.cis.es), people consider “negative” the way in which the media inform about immigration, but, on the other hand, some of the main reasons behind their bias are closely related to the link immigration/minorities-stereotypes fostered by the media: increasing crime rates, misuse of benefits, resistance to assimilate, poor hygiene, domestic violence and so on (Cea D’Ancona & Valles, 2010; Pérez-Yruela & Desrués, 2007). The role of the Spanish media on the activation of xenophobia has been verified in several studies (e.g., Igartua & Cheng, 2009; Igartua, Muñiz, Otero, Cheng & Gomez-Isla, 2008; Muñiz, Igartua, De la Fuente & Otero, 2007).

Now that the context of intergroup relations in Spain has been briefly outlined, particularly concerning the attitudes and opinions toward immigration and ethnic minority groups, it is now necessary to investigate how schematic representations of contact with these groups are conformed while identifying people’s beliefs and reasons for which some groups are accepted or rejected.

Method

Four focus groups discussions were carried out to analyze perceptions, opinions and beliefs in young Spaniards about ethnic minorities in Spain. The sample used in this study consisted of 26 students of the University of Salamanca (8 male; 18 female) with a mean age of 21 years. The participants were recruited from different academic backgrounds (e.g., Economics, Communication or Sociology) and geographic regions (e.g., Catalonia, Extremadura, Andalusia). They were instructed to fill in a form with their demographic data and an *Intergroup Thermometer Scale* (Esses, Haddock, y Zanna, 1993), which assesses in a gradient from 0 to 100% the degree of perceived affective proximity to 10 minority ethnic groups in Spain. In addition, a semi-structured script was created to guide the group interviews. This guideline was divided into five thematic sections: 1) The most important social problems influencing the country, 2) Knowledge about ethnic groups in Spain, 3) Contact experiences, 4) Perceived affective distance towards ethnic groups, and 5) Group attributes.

The information gathered was analyzed using the protocol of Páez, Valdosedal, Igartua, Basabel & Iraurguij (1992), which consists in converting the qualitative data into countable units for a further statistic analysis. This process begins in listing all the ideas contributed by the participants; then, based on the thematic sections, a system of categories is created using the “bunch” technique (Igartua, 2006), which implies developing codes for clusters of ideas following a similarity criterion (i.e., ideas with a semantic similarity). In this study, the category system was comprised of 97 codes. All the listed ideas are then re-codified taking the category system as a guide, and an intercoder reliability test is carried out (15% percent of total ideas). Finally, multivariate statistics are used to uncover underlying dimensions in their conversations.

Results

A total of 1,111 ideas were listed from transcriptions of the focus groups. Most of them were expressed while discussing the 4th and 5th thematic sections. In order to check the dominant tendency of each code among the groups, multivariate tests were run introducing the focus group as the unit of analysis and the created codes as dependent variables. Table 3 shows the distribution of ideas and the intercoder reliability indicator for every section of the script. As shown in the table, reliability was

low for sections 1 (social problems) and 4 (perceived affective distance); hence, no further multivariate tests were applied on these sections.

Table 3. Distribution of ideas in each section

Thematic section	Frequency of ideas	Percentage on the Total of ideas	Agreement percentage	Scott's Pi
Social problems	186	16.74	61.76	0.49
Knowledge	203	18.27	74.46	0.71
Contact	79	7.11	80	0.76
Distance	297	26.73	68.42	0.54
Attributes	346	31.14	79.24	0.76

Because of limited space, the results for section five alone will be reported. In such domain, participants were asked to speak about typical attributes (positive and negative) in ethnic groups commonly associated to illegal immigration (i.e., Eastern Europeans, Latin Americans, Maghribians, Africans)³, as well as in the gypsy group. This criterion was based on the assumption that the aforementioned minorities are more stigmatized than other social groups in Spain (Gamella, 1996; García et al., 1996); therefore, it was expected that participants would express more consistent and clear ideas regarding these groups. Thus, a consensus index was created from multiplying the number of times that one code (i.e., an attribute) was present among the focus groups; and this number was divided into the proportion of ideas related to each ethnic minority (code x groups/100% ideas for each minority). The most prevalent attributes are presented in Table 4⁴.

One of the primary aims of this study was to analyze the schematic representations of ethnic minority groups in terms of permeability in the intergroup borders: in this sake, the ratio of ideas related to stereotypes in each ethnic group was compared to the scores in the Intergroup Thermometer Scale (ITS). As ideas of perceived distance (section 4) had low reliability, qualitative interpretations will be made from these descriptive scores. Figure 1 shows the hierarchy that had arisen from

³ As documented by Cea D'Ancona & Valles (2009), Spaniards use to make a conceptual distinction between *immigrants* and *foreigners*: the formers usually come from outside the EU, from a poor economic and educational background, and are commonly related to illegal activities; whereas the latter usually come from inside the EU or other developed countries, from an economic, social and educational background higher than the Spanish one, and are commonly related to leisure activities.

⁴ Participants in the discussions took people from Northern Africa and the Middle East as Maghribians: being the Muslim religion the framework of reference.

the participants' perceptions regarding affective distance towards ethnic minorities in the Spanish society.

Table 4. Stereotyped attributes in minority ethnic groups

Ethnic group	Attribute	Ratio
Gypsies	Delinquents	30.54
	Misfits	26.95
	Cheerful	8.98
	Talented	8.98
Latin Americans	Male chauvinists	24.11
	Heterogeneous	21.43
	Sociable	14.29
	Attractive	10.71
	Illiterate	8.93
Asians	Hermetic	28.89
	Culturally different	13.33
	Intelligent	13.33
	Hard-workers	11.11
	Pleasant	8.89
	Unfair traders	6.67
Maghribians and Southern Saharans	Misfits	23.89
	Male chauvinists	21.24
	Culturally different	21.24
	Delinquents	10.62
	Cultural richness	8.85
	Gastronomy	7.08
Eastern Europeans	Delinquents	50
	Hermetic	30

Note: These attributes are codes grouping ideas with a similar meaning (e.g., “dealers”, “thieves” and “murderers” are grouped within the code *Delinquents*). The ratio percentage represents the number of ideas regarding all negative/positive attributes expressed for each ethnic group.

As can be seen in Figure 1, minorities from European countries (Northern, Central and Southern) were perceived as affectively “closer”; whereas Eastern Europeans and Gypsies were perceived “farther” than the rest. Moreover, based on the ratio of ideas on positive attributes, the best evaluated ethnic minorities were the Latin American and the Asian ones: the total ratio of answers expressed on these two groups was above 4.5%, just one position behind the Gypsies (see Table 5).

Figure 1. Percentages in perceived affective closeness towards ethnic minorities.

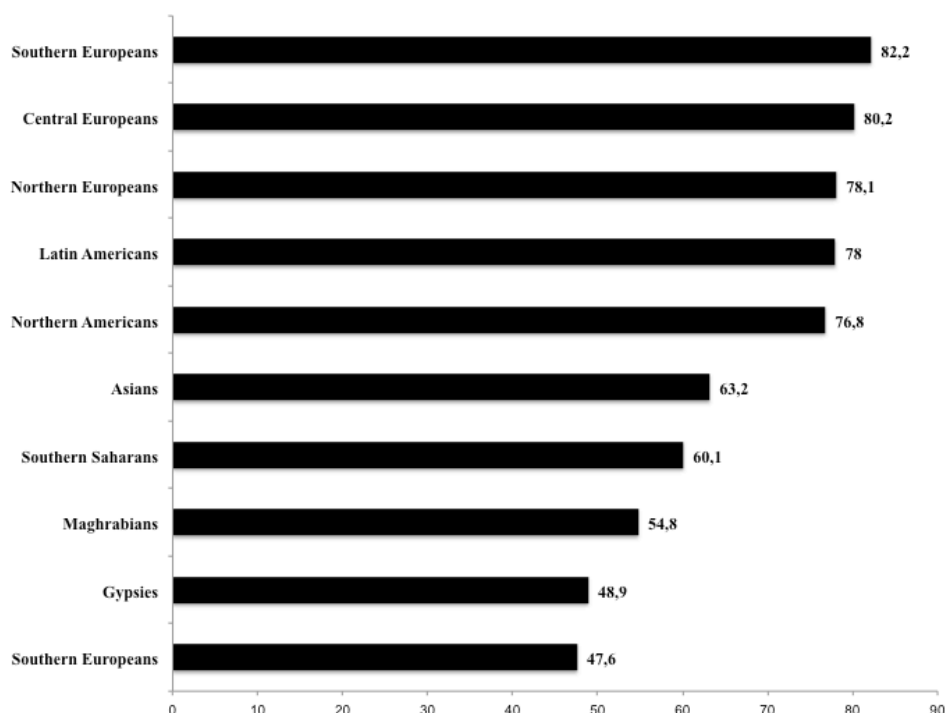


Table 5. Ratio of ideas on stereotyped attributes in ethnic groups and their positions in the intergroup thermometer rank.

Ethnic group	Frequency of ideas		% Total ideas	Position in the ITS rank
	Positive Attributes	Negative Attributes		
Gypsies	17	50	6.03	9
Latin Americans	25	30	4.95	4
Asians	20	31	4.59	6
Maghrabians and Southern Saharans	15	31	4.14	7 & 8
Eastern Europeans	2	10	1.08	10 ⁰

Although participants expressed more positive attributions for Latin Americans and Asians, the former occupy a middle position in the ITS rank, closer to the majority Spanish group. Accordingly, the ideas grouped in the 4th section highlight cultural similarities as a factor that can explain this perceived closeness:

“Because, maybe there are some manners that seem similar to ours [*Latin America*]. I mean, not all of them, but perhaps some manners or ideas. I think that Spain is more like Latin America than Europe.” (Focus Group 1)

“The thing is that we haven’t been taught anything about the Asian culture...even in the school, the institute...anything! Well, yeah, the Gypsy culture yes: the typical thing and so on; but regarding Asia, regarding Chinese people and their traditions...it is broadly unknown.” (Focus Group 2)

Summary of the Main Findings

The information obtained in the schematic representations of contact with ethnic minorities offers two major contributions: on one hand, the Latino group seems to be the best valued ethnic minority, compared to other stigmatized minorities, due to the prevalent cultural similarities between them and the majority Spanish group. This could be reflected in a marked degree of acceptance of its members in terms of “permeability”, which is tightened or loosened by the native population based, sometimes, on how socially desirable the group and its members are. On the other hand, the stereotypes that participants considered as very typical of the minority groups, including those associated to the Latin group, were defined and collected in order to prepare the disconfirming strategy to be used in the experimental study in CMC. It was expected then, that an interethnic contact with the Latin American ethnic group would yield more positive results than an interaction with more stigmatized groups such as the Gypsy one.

Study 2: Interethnic Contact in a Computer-mediated Communication.

The purpose of this study was to test the effects of an intergroup contact, using CMC, on negative attitudes toward the Latin American out-group. An experimental test was done using a new version of the CMC simulator called PISCO (Programa Informático de Simulación de la Comunicación entre los Ordenadores) (Moral-Toranzo, Canto-Ortiz, y Gómez-Jacinto, 2007), which makes users believe that they are participating in an online group meeting and that the other virtual participants are in fact “real”. The software employs an automatic script with pre-recorded answers that are successively shown during the virtual meeting as the experimental participant introduces textual communication. In order to validate SIDE’s model predictions, the visual identifiability of virtual groups was manipulated by showing on the screen the photograph of the participants (identifiable group) or only their national flag (anonymous group). Additionally, in order to validate SIP’s theory predictions, the communicative interpersonal behaviour of the Latino confederate was manipulated by enacting a stereotype-confirming or disconfirming behaviour. With these manipulations,

the following hypotheses of CMC contact effects on negative attitudes toward the Latino out-group were formulated:

H1. The Latino confederate with disconfirming behavior will produce more changes in the negative attitudes toward the Latino out-group than the Latino confederate with confirming behavior.

H2. The disconfirming behaviour of the Latino confederate will produce changes in the negative attitudes toward the Latino out-group. These changes will be greater in the anonymous than in the identifiable groups.

Likewise, in order to test the role of typicality in generalizing the contact effect a third hypothesis was formulated:

H3: The Latino confederate's typicality will moderate his disconfirming behaviour: the more typical of his ethnic group he is perceived, the greater the change in stereotyped perceptions of this group.

The last two hypotheses were formulated in order to test the affective bond created during the interaction as a mediator of the disconfirming behaviour on changes in attitudes (Pettigrew, 1998; Pettigrew & Tropp, 2006). In this study, the perceived attraction towards the confederate, if any, is considered to be a potential mediator of his disconfirming behaviour and membership in the virtual group on the negative attitudes towards the Latino out-group. However, it is important to define in advance whether this attraction is derived from categorization processes (i.e., in-group attraction), or influenced by the confederate's behaviour (i.e., interpersonal attraction). Two different effects are expected in this regard: one in terms of the *local group* (the virtual team), and other one in terms of the broad national identity (i.e., ethnic in-group). Thus, predictions for each effect and group have been formulated:

H4. In the identifiable groups, in contrast to the anonymous ones, local group effects will be produced; that is to say: a disconfirming behaviour will be associated with perceptions of (a) prototypicality of self and (b) perceived attraction. Likewise, prototypicality will be associated to (c) local group self-categorization and attraction too (d). The group self-categorization will be associated with the perceived attraction as well (e), but this attraction will not be associated with changes in the negative attitudes towards the Latino out-group.

H5. In the anonymous groups, in contrast to the identifiable ones, national group effects will be produced; that is to say: a disconfirming behaviour will be associated with perceptions of (a) prototypicality of self and (b) perceived attraction. Likewise, prototypicality will be associated to (c) local group self-

categorization and attraction too (d). The group self-categorization will be associated with the perceived attraction as well (e), and this attraction will be associated with changes in the negative attitudes towards the Latino out-group (f).

Method

A total of 104 participants (41 males and 63 females; $M_{age}=20$ years) were selected. All of them were Spanish students from Salamanca University, coming from different academic disciplines and backgrounds as well. The selection was made using a pre-test questionnaire that was filled at least 15 days before the meeting session. All participants were informed that they would participate in an online exchange session with other students from different institutions in Salamanca.

Design and Procedure

A 2 x 2 between-subject factorial design was used. Two independent variables were introduced: the group visual identifiability with two values (identifiable and anonymous) and the Latino confederate's behaviour with another two different values (stereotype confirming and disconfirming). As already mentioned, visual identifiability was manipulated by introducing ostensible photographs of participants in the identifiable groups, and national flags in the anonymous groups; this manipulation was planned to stimulate group self-categorization in terms of the local group in the identifiable condition, and the national ethnic group in the anonymous condition (i.e., five Spanish members and one from Latin America). For the behaviour manipulation, two profiles of a same character were created⁵: a young Ecuadorian⁶ immigrant who has been living in Spain for six years, and who possesses stereotyped characteristics from the Latin American ethnic group (e.g., misses his family, plays football, speaks a particular slang from his country). The Latino confederates who collaborated in this study were instructed to behave confirming or disconfirming to some group stereotypic attributes (positively and negatively valenced). In the disconfirming condition, for instance, the confederate contributed more to the test and made his ideas clearer; his

⁵ 10 students (5 males and 5 females) who did not participate in the study were presented with 10 photographs and asked to evaluate the typicality and attractiveness of Latin American men and women faces in a 6-point scale. Those pictures evaluated as "very attractive" or "not typical at all" were dropped. As female faces were evaluated as more attractive than male faces, a male face considered "very typical" and "moderately attractive" was kept.

⁶ The Ecuadorian nationality was chosen for the character because Ecuadorians are the major Latin American population immigrated to Spain (<http://extranjeros.meyss.es>).

communicative style was direct, and his overall speech was more “rational” than “cheerful”. Conversely, in the confirming condition he used more tag questions (indirect style), contributed lesser to discussions and his overall speech was more similar to the Latino stereotype.

The experimental test was carried out in a computer room with PC computers and it lasted around 60 minutes: when they arrived in the room, the participants were randomly distributed into the four experimental groups: confirming-identifiable group (27 subjects), confirming-anonymous group (26 subjects), disconfirming-identifiable group (20 subjects), and disconfirming-anonymous group (31 subjects). The test itself was split into three consecutive stages: introductory stage, group identity stage, and thematic discussion stage:

Introductory stage. The PISCO software simulates a connection to the Internet, and informs the participant that he/she will take a part in a virtual group comprised by six members (the experimental participant and other five supposed participants, of which one is a Latino member). In the identifiable group, the photographs of the members appeared on the left side of the screen (from top to bottom), whereas in the anonymous setting only the national flags of the participants appeared. In this initial stage, the only real user is the experimental participant.

Group identity stage. This stage is mainly aimed at ensuring that social identity is salient. In order to achieve this, the group members were called from the beginning “Group A”. Participants were told that all the members of the group were recruited because of their shared *Prosocial* identity (i.e., they all showed a tendency for group cooperation in their scores of the pre-test questionnaire). In addition, they (the in-group) did a test called a “group perceptive speed and performance test”: they were presented with a set of geometrical figures that had to be counted and matched by the whole group. At the end of the test the computer program displayed excellent scores for Group A (Salamanca), compared to scores for a “Group B” in a neighbour city (Valladolid), thus highlighting the cooperation levels of the group. The introduction of the inter-group context was aimed at increasing the salience of the in-group identity as opposed to an out-group (Group B). This kind of group-salience manipulation has proved to be successful in previous studies (Moral et al., 2007; Postmes, Spears, Sakhel & DeGroot, 2001).

Thematic discussion stage. The purpose of this last stage is to carry out the contact meeting in a CMC. Participants were told that the last part of the test required forming pairs for a thematic discussion. Again, the PISCO program simulated a random pairing from the six members and it presented to each experimental participant the member with whom he/she was going to cooperate in the next stage: without an exception, each experimental participant was always paired with the Latino member. Then, the participant was told to enter an email address and password (which was given to every participant when they got

to the computer room) to start the on-line communication in a separated virtual room. From this point onwards, the CMC stopped being simulated and became “real” by using a text-based IM application. Both the participant and the Latino member had to discuss some provocative issues in the Spanish context (e.g., tax payment for the catholic church), and to write most examples as possible related to different categories (e.g., names of Spanish provinces). The objective was making the participants believe that the software stored their responses and made a semantic balance: the more examples and reasons were given by both members, the better their scores. After 25 minutes, the IM communication stopped and showed in the screen outstanding Group A scores in contrast to Group B ones.

Once the thematic discussion was concluded, participants filled in a post-test questionnaire, which included the same items as the pre-test questionnaire but with some additional items to assess the online interaction: then, they were debriefed and dismissed.

Variables and Instruments

Dependent variables were measured before and after the contact took place; they were grouped into two blocks:

a) Negative attitudes toward the out-group. This block is made up of four dependent variables, which were obtained from both the pre-test and post-test questionnaires regarding negative attitudes toward the Latino out-group. The subjects indicated their opinion on a six-point Likert-like scale (1= *completely disagree*, 6= *completely agree*), in most of the measures in the questionnaires (with the exception of the *Percent Estimate Task*).

Subtle prejudice. This 10 items Spanish version by Rueda & Navas (1996), includes statements like: “Latino people living here teach their children values and skills different from those required to be successful in the Spanish society” ($\alpha = .80$).

Attribute negativity and Stereotypicality. These two indexes were calculated from scores of the Percent Estimate Task measure (e.g., Judd, Park, Ryan, Brauer & Kraus, 1995). The scale asks participants to consider some attributes of the following groups: Morrocans, Latinos and Northern Europeans, and to estimate the percentage of group members who possessed each of these attributes or who would agree with an attitude statement. All values were actually stereotypic attributes of the Latino group: two of them were positively valenced (*sociable, cheerful*), and two negatively valenced (*male chauvinist, religious conservative*); these attributes were partially taken from Study 1. In addition, two counterstereotypic attributes were included: once again, two positively valenced (*cultured, open minded*) and two negatively valenced

(*hermetic, apathetic*). An attribute negative rating ($\alpha = .66$) was calculated by subtracting scores of the prevalence of positive attributes (averaged across the eight positive items) among Latinos from the prevalence of the negative attributes (again averaged across all eight items). Stereotypicality, on the other hand ($\alpha = .71$), was calculated as well by subtracting the prevalence estimates of stereotypic and counterstereotypic attributes among Latinos (Wolsko et al., 2003). Larger scores in both ratings reflect more negative and stereotypic perceptions.

Identification with the national ethnic group. This 8-item scale, adapted from Hogg & Hains (1996), was originally introduced as a measure of ethnocentrism, and it includes statements like: “I prefer to belong to my ethnic group over other ethnic groups” ($\alpha = .87$).

b) Contact in CMC. This second block is made up of three dependent variables, which were obtained only from the post-test questionnaire regarding personal and group perceptions produced by the CMC.

Self-categorization (Lea et al., 2001). In this four-item scale, the subjects provide their opinion about statements like: “I see myself as a member of this group” ($\alpha = .85$).

Prototypicality. This four-item scale measured stereotyping of the Latino confederate in terms of the local group using statements like: “my discussion partner is an ideal member of this group” ($\alpha = .93$).

Interpersonal Attraction Scale (McCroskey & McCain, 1974). For this study, only items related to social attraction were used. The measure includes: “I think my discussion partner [Latino confederate] could be a friend of mine” ($\alpha = .86$).

Manipulation checking. Two additional measures were used to check the effectiveness of the experimental manipulations.

Perceived anonymity. This variable was measured with an adaptation of the Postmes et al. (2001) scale, which consists of two items like: “I am sure that nobody in the group knows anything about me”. Larger scores reflect more anonymity experienced during the interaction.

Typicality. The perceived typicality of the confederate was measured with a single item adapted from Spears, Doosje & Ellemers (1997): “How typical of his ethnic group do you consider your discussion partner? (1 = *Not at all typical*, 6 = *Very typical*).

Results

In order to verify the effectiveness of the experimental manipulations, the perceived anonymity in participants was analysed first. However, the reliability score of

this scale was not acceptable ($r=-.135$, $p=ns$); and significant differences were not observed in the identifiability of groups ($F(1, 102)= 0.87$, $p=.372$). In spite of this failure, depersonalization effects were expected to occur in the anonymous groups compared to the identifiable ones: because group categorization is based on depersonalized perceptions of self and others, the identification with national ethnic group measure was used to verify increases in group identification as produced by this visually cued category in the anonymous groups. The test showed a significant difference in this variable ($F(1, 101)=4.74$, $p=.032$), with a higher national ethnic group identification in the anonymous ($M=4.20$, $SD=1.10$) than in the identifiable groups ($M=3.80$, $SD=1.19$). Although these scores do not directly reflect an experience of anonymity, the introduction of the national flag enhanced attention to others in terms of a broader group identity and decreased individual differences; thus, depersonalized perceptions of group members prevailed more in the anonymous groups.

On the other hand, statistically significant differences were observed in the behaviour manipulation ($F(1, 102)=5.67$, $p=.019$): participants evaluated the Latino confederate as more typical of his ethnic group when he acted in a confirming manner ($M=4.18$, $SD=1.24$) than in a disconfirming way ($M=3.58$, $SD=1.32$). Thus, behaviour manipulation was successful. Likewise, this behaviour produced effects of attraction ($F(1, 102)=11.63$, $p=.001$), and prototypicality ($F(1, 102)=17.05$, $p=.000$): the Latino confederate who disconfirmed the stereotype was perceived as more attractive ($M=4.71$, $SD=0.99$) and prototypical of the local group ($M=4.24$, $SD=1.16$) than when confirmed the stereotype ($M=3.98$, $SD=1.18$ and $M=3.18$, $SD=1.41$ respectively). Nevertheless, there were not significant differences in self-categorization in terms of the local group.

Analysis of covariance (ANCOVA) was used to test the main and interaction effects of both independent variables into the dependent variables of negative attitudes toward the Latino out-group in the time after the CMC (T2), statistically controlling for these same measures in the time before (T1). In this way the impact of the independent variables would be obtained, statistically controlling for the changes in T2 regarding T1, thereby increasing the statistical power of the analysis. A significant effect of the confederate's behaviour on the stereotypicality measure was detected ($F(1, 96)=4.47$, $p=.037$), but contrary to what was expected, stereotypic perceptions of the Latino group prevailed more in the disconfirming condition than when the confederate acted in the

confirming manner (Table 6). No statistically effects of behaviour were observed in the rest of the negative attitude variables.

With regard to the hypothesized interaction effect between the independent variables, only the attribute negativity variable was affected ($F(1, 96)=4.29, p=.043$), but once again, scores in this measure showed a direction different to the one expected: negative perceptions prevailed more in the confirming-anonymous group than in the disconfirming-anonymous group. Table 6 shows the mean scores in each attitude variable toward the Latino out-group: although they go in the predicted direction, no statistically significant effects of the interaction were observed in the rest of the negative attitude variables.

Table 6. Effects of Visual Identifiability and the Confederate's Behaviour on the Negative Attitudes Toward the Latino Out-Group

Independent variable	Subtle prejudice		Attribute negativity		Stereotypicality	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Visual identifiability</i>						
Identifiable groups	2.85	0.86	-0.76	0.87	-0.19	1.19
Anonymous groups	2.98	0.89	-0.92	0.83	-0.14	0.92
$F_{\text{visual identifiability}}(1, 96)=$	1.57		0.93		0.01	
$\eta^2p=$.016		.010		.000	
<i>Behaviour</i>						
Confirming	2.96	0.83	-0.90	0.94	-0.37	1.10
Disconfirming	2.88	0.92	-0.79	0.82	0.04	0.95
$F_{\text{behaviour}}(1, 96)=$	2.56		0.82		4.47*	
$\eta^2p=$.026		.009		.045	
<i>Identifiability x behaviour</i>						
Confirming-identifiable	2.90	0.75	-0.66	0.82	-0.36	1.18
Confirming-anonymous	3.04	0.91	-1.15	0.87	-0.38	1.03
Disconfirming-identifiable	2.80	1.02	-0.90	0.94	.037	1.19
Disconfirming-anonymous	2.93	0.87	-0.73	0.75	.056	0.78
$F_{\text{identifiability x behaviour}}(1, 96)=$	0.96		4.29*		0.01	
$\eta^2p=$.010		.043		.000	

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

The third hypothesis posed a moderating effect of typicality on changes in stereotypic perceptions of the Latino group. To verify this prediction, each of the

negative attitudes were regressed⁷ in both the behaviour conditions and perceived typicality: changes in stereotypic perceptions would depend on the interaction between the disconfirming behaviour and perceived typicality, that is to say, if the confederated acted in a disconfirming manner and was nevertheless seen as typical of Latinos, then subtyping was expected to be avoided and perceptions of group variability to change. However, the analysis revealed no significant effect of the aforementioned interaction on any of the negative attitude variables ($\beta_s < 1$). The perceived typicality, at least in this study, did not moderate the effect of the confederate behaviour on group perceptions.

The last two hypotheses predicted a mediation effect of attraction from considering intergroup contact literature and SIDE assumptions. Specifically, two different effects were predicted taking into account categorization processes based in anonymity and identifiability of group participants. These effects were analysed using a path analysis (AMOS V.19). Partially based on Lea et al. (2007), the model used for this study was tested in each visual condition (i.e., identifiable and anonymous) with respect to the effect of the disconfirming behaviour on the negative attitudes, mediated by the perceived attraction to the Latino confederate, his perceived prototypicality and self-categorization perceptions. Once again, T1 measures of negative attitudes were statistically controlled.

Zero-order correlations between the variables included in the model are presented in Table 8. Although multi-group analyses require larger samples in order to assign an adequate number of cases per group, this sample size was large enough for the correlations of the variables included in the model to be statistically significant. As can be seen in the table, behaviour and attraction are positively correlated, as well as attraction, prototypicality and self-categorization; whereas attraction and subtle prejudice are negatively correlated. Another positive correlation between behaviour and stereotypicality is observed: an association already registered in the last two analyses. No additional correlations between attraction and the rest of the negative attitudes were observed therefore subtle prejudice is the only variable to be tested in the model. Of course, small or non-significant effects and big error bands are undoubtedly expected (as already seen in some cases), but if these effects go in the predicted direction,

⁷ In these analyses, the behaviour condition was recoded for contrast (0=*Confirming*; 1=*Disconfirming*); typicality and the interaction typicality x behaviour were mean-centered in order to avoid multicollinearity (see Wolsko et al., 2003). All attitude variables in T1 were included in the regression analysis for statistical controlling.

reproduce the same paths found in previous studies (e.g., Lea et al., 2007), and present a good adjustment, then the model shall be considered to be supported.

Table 8. Zero-Order Correlations of Variables Testing the Mediating Effects Model for Identifiable and Anonymous Groups

	1	2	3	4	5	6	7
1. Behaviour							
2. Attraction	.320**						
3. Prototypicality	.378***	.580***					
4. Self-categorization	.151	.527***	.543***				
5. Subtle prejudice in T2	-.058	-.272**	-.116	-.045			
6. Attribute negativity in T2	.075	.092	-.054	-.072	-.220*		
7. Stereotypicality in T2	.201*	.084	.136	.088	.034	.145	

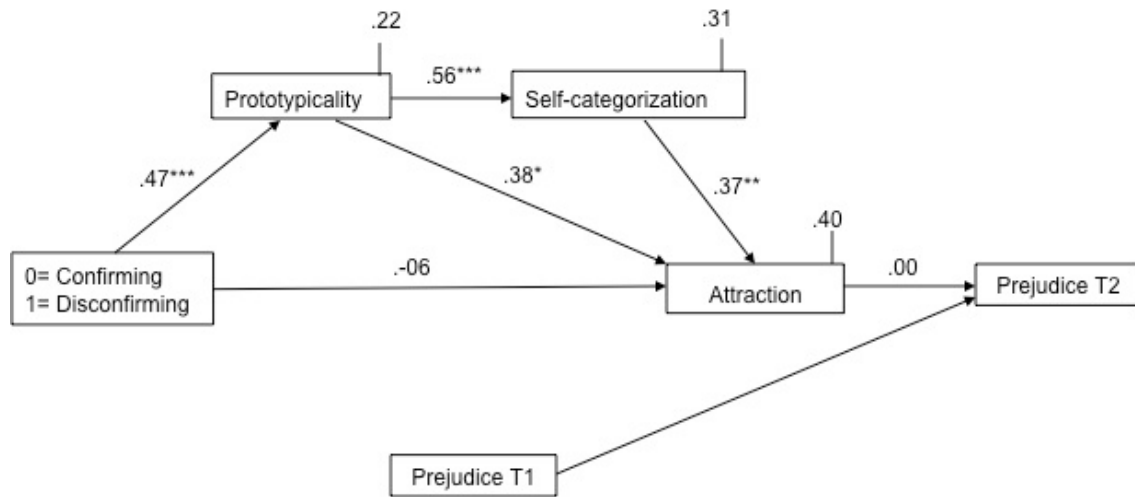
+p<.10, *p<.05, **p<.01, ***p<.001

Hypothesis four predicted attraction-mediating effects in terms of the local group, this is: disconfirming behaviour would positively predict increases in a) prototypicality and b) attraction. Prototypicality would predict increases in c) self-categorization and d) attraction as well; and self-categorization would be associated to attraction (e), but attraction would not predict changes in the negative attitude (f). As the last path was posed not to be significantly associated to prejudice, then this route was restrained⁸ within the model. Although the overall model fit was satisfactory, this hypothesis was not fully supported. Disconfirming behaviour was a significant predictor of prototypicality ($\beta = .47, p < .001, R^2 = .22$) but of perceived attraction toward the confederate ($\beta = -.06, p = .660$). Conversely, self-categorization ($\beta = .56, p < .001, R^2 = .22$) and attraction ($\beta = .38, p < .011$) were significantly predicted by prototypicality. Moreover, a large percentage of the variance in attraction was explained by both of these group perception variables ($R^2 = .40$). In the identifiable condition, thus, attraction to the Latino confederate depended on how prototypical of the local group he was seen, and on how much participants perceived being members of this group. Attraction, as hypothesized, was not significantly associated to changes in prejudice because no visual

⁸ Nested model comparisons were made in order to verify its fitness to data: factor loadings suggested that this restriction did not result in a statistically worsening of the overall model fit ($\chi^2(1) = 0.87, p = .351$).

category was cued in this condition; hence, only local group effects were observed (see Figure 2).

Figure 2. Model of Attraction-Mediating Effects in the Identifiable Condition

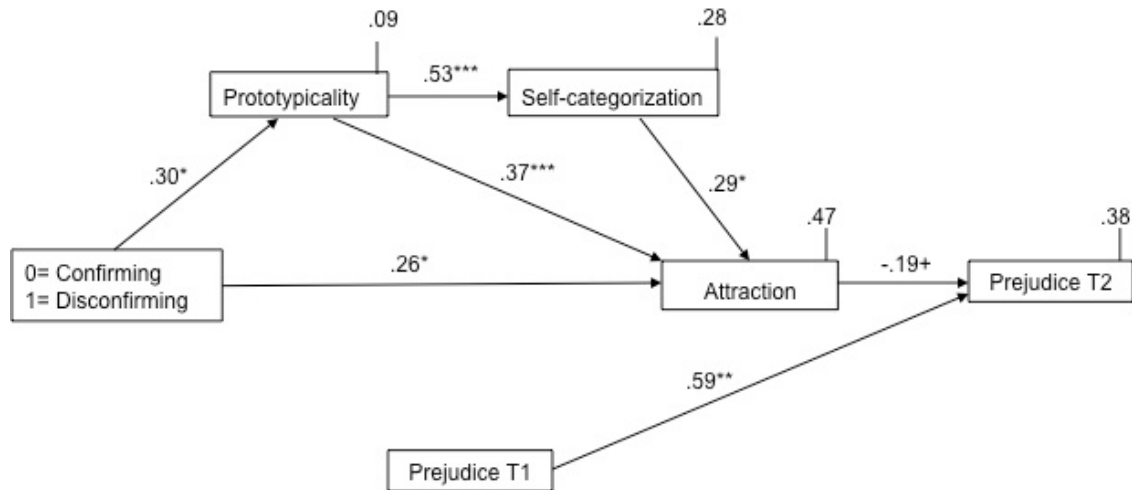


Note: $\chi^2= 19.68$, $p=.290$, $\chi^2/df= 1.15$, CFI= .98, RMSEA= .03 (standardized coefficients). + $p<.10$, * $p<.05$, ** $p<.01$, *** $p<.001$

The last hypothesis (five) predicted attraction-mediating effects in terms of the national ethnic group. Predicted paths are the same as in the previous model, but in this condition (anonymous), a significant association between attraction and prejudice was purported; therefore, the last path was not restricted. The model of attraction-mediating effects, tested in the anonymous condition, demonstrated good fit (see Figure 3); and the assessment of the path coefficients indicated that, while the disconfirming behaviour significantly predicted prototypicality ($\beta= .30$, $p<.020$, $R^2= .09$) and attraction ($\beta= .26$, $p<.012$), prototypicality predicted self-categorization ($\beta= .53$, $p<.000$, $R^2= .28$) and attraction as well ($\beta= .37$, $p<.000$). Self-categorization predicted attraction too ($\beta= .29$, $p<.012$); and both prototypicality and self-categorization explained almost half of the variance in attraction ($R^2= .47$). Finally, attraction negatively predicted prejudice, although this effect was found to be minimum ($\beta= -.19$, $p=.073$, $R^2= .38$). In the anonymous condition, thus, attraction to the Latino confederate depended on his type of behaviour, how prototypical of the local group he was seen, and on how much participants perceived being members of this group. Attraction, although in a minimum way, was associated to changes in prejudice because the national category was cued in this condition (i.e., introducing a national flag); hence, national group effects were

observed. Despite this minimum effect, probably produced as a consequence of the small sample size, the direction of path coefficients reflected most of the predictions made for this hypothesis. Thus, hypothesis five was partially supported.

Figure 3. Model of Attraction-Mediating Effects in the Anonymous Condition



Note: $\chi^2= 19.68$, $p=.290$, $\chi^2/df= 1.15$, CFI= .98, RMSEA= .03 (standardized coefficients). + $p<.10$, * $p<.05$, ** $p<.01$, *** $p<.001$.

Tables 9 and 10 present the total, direct and indirect effect coefficients for each path model. Table 9 (identifiable condition), shows effects only on attraction due to the lack of association between this variable and prejudice. As a matter of fact, the disconfirming behaviour was not found to be a predictor of attraction towards the Latino confederate, thereby confirming the hypothesis of local group effects: when this confederate was visually identifiable in his individual traits, his ethnic out-group membership was not relevant. In other words, as long as the experimental participant categorized him/herself and the confederate in terms of the common group, this Latino member was perceived as attractive.

Table 9. Effect Coefficients for the Path Model in the Identifiable Condition

Variable	Identifiable		
	Direct	Indirect	Total
1. Behaviour		.27	.27
2. Prototypicality	.38	.20	.58
3. Self-categorization	.36		.36

Note: DV= *Attraction*. Standardized coefficients for R². Coefficients are shown with statistical controlling of the T1 prejudice measure.

Finally, Table 10 (anonymous condition) reflects a different pattern from the model in the identifiable condition, as two group identities were salient: local and national groups. As the national category was visually cued in this condition, the intergroup context was salient and stereotypes of the Latino ethnic group were activated. Hence, while the Latino confederate was seen as attractive when he acted in a disconfirming manner, he was also perceived as more prototypical of the local group. Although marginally, individual behaviour and awareness of a shared group membership influenced changes in prejudiced views of the Latino out-group. It is important to notice that, in both tables, prototypicality perceptions contributed more to variances in attraction and prejudice than the confederate's behaviour.

Table 10. Effect Coefficients for the Path Model in the Anonymous Condition

Variable	Anonymous		
	Direct	Indirect	Total
1. Behaviour		-.07	-.07
2. Attraction	-.18		-.18
3. Prototypicality		-.09	-.09
4. Self-categorization		-.05	-.05

Note: DV= *Prejudice in T2*. Standardized coefficients for R^2 . Coefficients are shown with statistical controlling of the T1 prejudice measure.

Discussion

This thesis dissertation analysed the effect of contact in a CMC on negative perceptions toward an ethnic out-group. The contact was settled in a majority-minority group context in Spain. The purpose of the first study was to explore and analyse how schematic representations of contact with ethnic minority groups are conformed. In this sense, the hierarchy formed from the participant's distance perceptions with European minorities in top replies results of previous studies (e.g., Hagendoorn, Drogendijk, Tumanov & Hraba, 1998; Snellman & Ekehammar, 2005), while positioning of Gypsies and Eastern Europeans in the bottom replies at least two Oberaxe reports (Cea D'Ancona & Valles, 2009, 2010; Pérez-Yruela & Desrues, 2007). Particularly, in this context more negative beliefs are associated to Gypsies compared to other social groups, while the Latin American was the best-evaluated minority among other groups

commonly associated to illegal immigration. Cultural similarities between the Spanish majority and Latinos seemed to be key elements of closeness perceptions.

Limitations of this study included failures in the codification process that led to a low reliability of sections one and four, the nature of the sample (participants were mostly women), and the fact that only impressions of majority group members were obtained. Future research must take into account not only perspectives of both groups, but to check different contexts of contact (e.g., academic, organizational, international collaborations; as well as the different schemes that are activated in each scenario).

The purpose of the second study was to carry out an empirical test of an intergroup contact in CMC on the negative attitudes toward the Latino out-group. Despite the failure in manipulating visual anonymity, depersonalized perceptions of participants were observed in the anonymous groups compared to the identifiable ones. This effect gave support to the SIDE's model predictions regarding group categorization processes when individual differences are not identifiable and social identity is salient (e.g., Postmes & Spears, 2002). The Latino confederate, on the other hand, was seen as more attractive when he acted in a disconfirming manner than when he confirmed group stereotypes: particularly, perceptions of attraction to an individual member support predictions in the SIP perspective (Walther, 1992) regarding likeability of users based on their communicative styles adapted to CMC features.

With regard to hypotheses one and two, the impact of behaviour on the negative attitudes was found to be opposite to predictions: stereotypic perceptions of the Latino group prevailed more in the anonymous groups and when the confederate acted in a confirming manner. An explanation for this is that the disconfirming confederate was indeed mentally subtyped from his ethnic group as the intergroup contact literature suggests (Allport, 1954; Reid & Anderson, 2010). Moreover, it is possible that the time for interaction was too short to develop impressions that linked the disconfirming instance and his group membership, so the stereotype kept "frozen" after this type of behaviour. On the other hand, outstanding scores of Group A may have produced overall good impressions of team members: as the confirming instance was seen as more typical of his ethnic group, changes in stereotypic perceptions occurred. Support for this reasoning can be inferred from scores in the confirming-anonymous group, and in the non-significant moderation effects of typicality on the negative attitudes.

Lastly, in order to verify the attraction-mediating prediction, a model that included interpersonal and group perception variables was created. This model was further analysed in each of the visual conditions. Path coefficients corroborated almost all predictions. In the identifiable condition, perceived attraction to the Latino confederate was determined more by his membership in the local group than by his disconfirming behaviour. Conversely, attraction in the anonymous condition did mediate the effect of the disconfirming behaviour and local group categorizations on changes in prejudice: the visually cued national category in the anonymous condition (national flag) might have activated group stereotypic perceptions when participants noticed that one *virtual accomplice* was actually a member of the Latino group; then the Latino confederate was perceived to share membership in the local group and in the ethnic out-group. Despite its marginal effect size, due to the small number of participants, this model was supported. These results, again, provide support for the SIDE model regarding perceiving attraction from depersonalized perceptions of self and others in terms of a shared group categorization (Lea, et al., 2001; Lea et al., 2007).

In this line, indirect effects of prototypicality contributed more to the variance in attraction than his disconfirming behaviour. This result does not mean the interpersonal behaviour is less important than group membership: on the contrary, it is possible that the interplay of this interpersonal communicative style and the awareness of a common group membership produced better outcomes than focusing on interpersonal or group perceptions solely (see Wang et al., 2009). After all, these findings not only reinforced predictions of contact with single out-group members (Klein & Snyder, 2003; Wilder, Simon & Faith, 1996; Wolsko et al., 2003), but they also contributed to theoretical assumptions of the CMC role in improving intergroup relationships.

Several limitations in this study must be appointed: first, the sample size constrained many of the predicted effects on the negative attitude variables. Future research must include larger samples and, if possible, with formed groups based on prejudice levels (e.g., *bigots*, *subtles*, *equalitarians* as in Pettigrew & Meertens, 1995). Another big limitation was failure in manipulating anonymity perceptions in participants: this has been a constant problem in CMC research (e.g., Moral-Toranzo et al., 2007). Alternative measures or sources of group salience, such as perceived geographical dispersion of group members, must be studied (e.g., Walther, 1997).

To conclude, future replies must include contact with different ethnic minorities in order to find out how effects of contact in CMC varies in each group. Likewise, as suggested by Harwood (2010), it is important to examine how moving from mediated ways of contact (e.g., CMC) to traditional face-to-face encounters contribute to enhance or improve intergroup relationships.

General Conclusions

The original contribution of this thesis dissertation consisted in carrying out an empirical test of intergroup contact in a computer-mediated communication. Particularly, an online group encounter between two ethnic groups was designed: both of them are based on a majority-minority relationship in Spain. The results showed that contact effects in CMC were favorable for reducing some negative attitudes in the majority group. Perceiving a minority out-group member sharing membership in a same generic, local in-group with a positive social identity, had a stronger influence in reducing bias towards the out-group than perceiving a stereotype-disconfirming behavior enacted by that individual member. However, the size of the contact effect in this study was relatively small as the out-group stereotype was not relevant during the interaction in the virtual setting.

Overall, these results provided support for utopic perspectives of communication technologies: especially for those that consider the Internet as an ideal space for intergroup-relationship development, otherwise unlikely in real milieus. In this regard, CMC offers an appropriate option for preliminary interventions to face-to-face meetings: particularly for people in marginalized intergroup contexts, or people who have not had opportunities for contact with members of other groups due to geographical, social, physical or personal barriers. Nevertheless, the results obtained in this research must still be verified in other contexts such as organizational, academic or social network settings. Future research must consider as well involving other groups in the interaction, as for example men and women; young and old people; or any social groups that tend to be stereotyped. Additionally, other factors must be taken into account, such as the formal or informal nature of the meeting, the amount of time spent in the interaction, and the interfaces or devices in which the communication takes place. As in real settings, intergroup communication in virtual channels is influenced by several elements: by knowing how personal and social identities interplay with

technological features, and how communications are shaped by these aspects, it would be possible to make accurate predictions of contact in this medium.

References in this text

- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.
- Amichai-Hamburger, Y. & McKenna, K. Y. A. (2006). The contact hypothesis reconsidered: Interacting via the Internet. *Journal of Computer-Mediated Communication*, 11(3), 825-843.
- Brown, R., Vivian, J., & Hewstone, M. (1999). Changing attitudes through intergroup contact: The effects of group membership salience. *European Journal of Social Psychology*, 29, 741–764.
- Byrne, D. (1971). *The attraction paradigm*. Nueva York: Academic Press.
- Cea D'Ancona, Ma A., & Valles Martínez, M. S. (2009) *Evolución del racismo y la xenofobia en España [Informe 2009]* Madrid: OBERAXE. Ministerio de Trabajo e Inmigración.
- Cea D'Ancona, Ma A., & Valles Martínez, M. S. (2010) *Evolución del racismo y la xenofobia en España [Informe 2010]* Madrid: OBERAXE. Ministerio de Trabajo e Inmigración.
- Cook, S. W. (1984). Cooperative interaction in multiethnic contexts. In N. Miller y M. Brewer (Eds.), *Groups in contact: The psychology of school desegregation*. Nueva York: Academic Press.
- Cress, U. (2005). Ambivalent effect of member portraits in virtual groups. *Journal of Computer Assisted Learning*, 21, 281-291.
- Crisp, R. J., Husnu, S., Meleady, R., Stathi, S., y Turner, R. N. (2010). From imagery to intention: A dual route model of imagined contact effects. *European Review of Social Psychology*, 21, 181-236.
- Crocker, J., & Weber, R. (1983). Cognitive structure and stereotype change. *Advances in Consumer Research*, 10, 459-463.
- Desforges, D. M., Lord, C. G., Pugh, M. A., Sia, T. L., Scarberry, N. C., & Ratcliff, C. D. (1997). Role of group representativeness in the generalization part of the contact hypothesis. *Basic and Applied Social Psychology*, 19, 183–204.
- Deutsch, R., & Fazio, R. (2008). How subtyping shapes perception: Predictable exceptions to the rule reduce attention to stereotype-associated dimensions. *Journal of Experimental Social Psychology*, 44(4), 1020-1034.
- Ellis, D. G., & Maoz, I. (2007). Online argument between Israeli Jews and Palestinians. *Human Communication Research*, 33(3), 291-309.
- Esses, V. M., Haddock, G., & Zanna, M. P. (1993). Values, stereotypes, and emotions as determinants of intergroup attitudes. In D. M. Mackie y D. L. Hamilton

- (Eds.), *Affect, cognition and stereotyping: Interactive processes in group perception* (pp. 137-166). Orlando, FL: Academic Press.
- Finchilescu, G. (2010). Intergroup anxiety in interracial Interaction: The role of prejudice and metastereotypes. *Journal of Social Issues*, 66(2), 334-351.
- Fiske, S. T. & Taylor, S. E. (1991). *Social cognition*. Nueva York: McGraw Hill.
- Fujioka, Y. (1999). Television portrayals and African-American stereotypes: Examination of television effects when direct contact is lacking. *Journalism and Mass Communication Quarterly*, 76, 52-75.
- Gamella, B. (1996). *La población Gitana en Andalucía. Un estudio exploratorio de sus condiciones de vida*. Sevilla: Departamento de Antropología y Trabajo Social de la Universidad de Granada.
- García, H., Adroher, S., & Blanco, M. (1996). *Minorías étnicas: gitanos e inmigrantes*. Madrid: Editorial CCS.
- Glaser, J., & Kahn, K. (2005). Prejudice, discrimination, and the Internet. En Y. Amichai-Hamburger (Ed.), *The social net: Understanding human communication in cyberspace* (pp. 247-274). Oxford: Oxford University Press.
- Hagendoorn, L., Drogendijk, R., Tumanov, S., & Hraba, J. (1998). Inter-ethnic preferences and ethnic hierarchies in the former Soviet Union. *International Journal of Intercultural Relations*, 22, 483-503.
- Harwood, J. (2010). The contact space: A novel framework for intergroup contact research. *Journal of Language and Social Psychology*, 29(2), 147-177.
- Harwood, J., McKee, J., & Lin, M. C. (2000). Younger and older adults' schematic representations of intergenerational communication. *Communication Monographs*, 67, 20-41.
- Harwood, J., Paolini, S., Joyce, N., Rubin, M., & Arroyo, A. (2011). Secondary transfer effects from imagined contact: Group similarity affects the generalization gradient. *British Journal of Social Psychology*, 50 (1), 180-189.
- Hogg, M. A., & Hains, S. C. (1996). Intergroup relations and group solidarity: Effects of group identification and social beliefs on depersonalized attraction. *Journal of Personality and Social Psychology*, 70, 295-309.
- Igartua, J. (2006). *Métodos cuantitativos de investigación en comunicación*. Barcelona: Bosch.
- Igartua, J. J. & Cheng, L. (2009). Moderating effect of group cues while processing news on immigration. Is framing effect a heuristic process? *Journal of Communication*, 59 (4), 726-749.

- Igartua, J.J., Muñiz, C., Otero, J.A., Cheng, L., & Gómez-Isla, J. (2008). Recepción e impacto socio-cognitivo de las noticias sobre inmigración. *Revista de Psicología Social*, 23(1), 3-16.
- Judd, C. M., Park, B., Ryan, C.S., Brauer, M. & Kraus, S. (1995). Stereotypes and ethnocentrism: Diverging interethnic perceptions of African-American and white American youth. *Journal of Personality and Social Psychology*, 69, 460-481.
- Kiesler, S., Siegel, J., & McGuire, T. (1984). Social psychological aspects of computer-mediated communication. *American Psychologist*, 39, 1123–1134.
- Klein, O. & Snyder, M. (2003). Stereotypes and behavioral confirmation: From interpersonal to intergroup perspectives. *Advances in Experimental Social Psychology*, 35, 153-234.
- Kunda, Z., & Oleson, K. C. (1995). Maintaining stereotypes in the face of disconfirmation: Constructing grounds for subtyping deviants. *Journal of Personality and Social Psychology*, 68, 565–579.
- Kunda, Z., & Oleson, K. C. (1997). When exceptions prove the rule: How extremity of deviance determines the impact of deviant examples on stereotypes. *Journal of Personality and Social Psychology*, 72, 965–979.
- Lea, M. & Spears, R. (1991). Computer-mediated communication, deindividuation and group decision-making. *International Journal of Man-Machine Studies*, (34), 283-301.
- Lea, M., Spears, R., & de Groot, D. (2001). Knowing me, knowing you: Anonymity effects on group polarization in CMC within groups. *Personality and Social Psychology Bulletin*, 27, 526-537
- Lea, M., Spears, R., & Watt, S. E. (2007). Visibility and anonymity effects on attraction and group cohesiveness. *European Journal of Social Psychology*, 37, 761-773.
- Lee, E. (2004). Effects of visual representation on social influence in computer-mediated communication. Experimental test of the Social Identity Model of Deindividuation Effects. *Human Communication Research*, 30(2), 234-259.
- Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35, 63-78.
- Martínez, C. (2000). Intención de contacto, ansiedad y actitud en la relación con exogrupos. *Revista de Psicología Social*, 15(1), 31-44.
- McCroskey, J. C., & McCain, T. A. (1974). The measurement of interpersonal attraction. *Speech Monographs*, 41, 261-266.
- McKenna, K., & Seidman, G. (2005). You, me, and we: interpersonal processes in electronic groups. In Y. Amichai-Hamburger (Ed.), *The social net: Understanding*

human communication in cyberspace (pp. 191-217). Oxford: Oxford University Press.

- Moral-Toranzo, F., Canto-Ortiz, J., & Gómez-Jacinto, L. (2007). Anonymity effects in computer-mediated communication in the case of minority influence. *Computers in Human Behavior, 23*(3), 1660-1674.
- Muñiz, C., Igartua, J. J., de la Fuente, M. & Otero, J. A. (2007). La inmigración latinoamericana en los contenidos informativos. Un estudio sobre las noticias de prensa y televisión españolas. *Palabra Clave, 10*(2), 75-92.
- Ortiz, M., & Harwood, J. (2007). A social cognitive theory approach to the effects of mediated intergroup contact on intergroup attitudes. *Journal of Broadcasting & Electronic Media, 51*(4), 615-631.
- Páez, D., Valdoseda, M., Igartua, J.J., Basabel, N. & Irauguij, J. (1992). Las representaciones sociales del alcohol. *Revista de Psicología Social Aplicada, 2* (2-3), 33-54.
- Parker, D. & Song, M. (2006). New ethnicities online: Reflexive racialisation and the Internet. *The Sociological Review, 54*(3), 575-594.
- Pérez-Yruela, M. & Desrués, T. (2007) *Opinión de los españoles en materia de racismo y xenofobia 2007*. Madrid: OBERAXE. Ministerio de Trabajo y Asuntos Sociales.
- Pettigrew, T. F. (1997). The affective component of prejudice: empirical support for the new view. In S.A. Tuch & J.K. Martin (Eds.), *Racial Attitudes in the 1990s: Continuity and Change* (pp. 76–90). Westport, CT: Praeger.
- Pettigrew, T. F. (1998). Intergroup Contact Theory. *Annual Review of Psychology, 49*(1), 65-85.
- Pettigrew, T. F., y Meertens, R. W. (1995). Subtle and blatant prejudice in Western Europe. *European Journal of Social Psychology, 25*, 57-75.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751-783.
- Pettigrew, T. F., y Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*(6), 922-934.
- Postmes, T., & Baym, N. (2005). Intergroup dimensions of the Internet. In J. Harwood & H. Giles (Eds.), *Intergroup communication: Multiple perspectives* (pp. 213-240). Nueva York: Peter Lang.
- Postmes, T., & Spears, R. (2002). Behavior online: Does anonymous computer communication reduce gender inequality? *Personality and Social Psychology Bulletin, 28*(8), 1073-1083.

- Postmes, T., Spears, R., Sakhel, K., & De Groot, D. (2001). Social influence in computer-mediated communication: the effects of anonymity on group behavior. *Personality and Social Psychology Bulletin*, 27, 1243–1254.
- Reid, S. A., & Anderson, G. L. (2010). Language, social identity and stereotyping. In Giles, H., S. Reid y J. Harwood (Eds.), *The dynamics of intergroup communication* (pp. 91-104). Nueva York: Peter Lang.
- Rothbart, M., & John, O. P. (1985). Social categorization and behavioral episodes. A cognitive analysis of the effects of intergroup contact. *Journal of Social Issues*, 41, 81-104.
- Rueda, J., & Navas, M. (1996) Hacia una evaluación de las nuevas formas del prejuicio racial: las actitudes sutiles del racismo. *Revista de Psicología Social*, 11(2), 131-149.
- Schiappa, E., Gregg, P. B., & Hewes, D. E. (2005). The parasocial contact hypothesis. *Communication Monographs*, 72, 92-115.
- Snellman, A., & Ekehammar, B. (2005) Ethnic Hierarchies, Ethnic Prejudice and Social Dominance Orientation. *Journal of Community & Applied Social Psychology*, 15, 83-94.
- Spears, R., Doosje, B., & Ellemers, N. (1997). Self-stereotyping in the face of threats to group status and distinctiveness: The role of group identification. *Personality and Social Psychology Bulletin*, 23, 538-553.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & L. W. Austin (Eds.), *Psychology of intergroup relations*. (pp. 7-24). Chicago: Nelson-Hall.
- Turner, J. C. (1987). A self-categorization theory. In J.C. Turner, M.A. Hogg, P.J. Oakes, S.D. Reicher, & M.S. Wetherell (Eds.), *Rediscovering the social group: A self-categorization theory* (pp.68-88). Oxford: Basil Blackwell.
- Walther, J. B. (1992). Interpersonal effects in computer-mediated interaction. A Relational Perspective. *Communication Research*, 19(1), 52-90.
- Walther, J. B. (1997). Group and interpersonal effects in international computer-mediated collaboration. *Human Communication Research*, 23(3), 342-369.
- Walther, J. B. (2009). Computer-mediated communication and virtual groups: Applications to interethnic conflict. *Journal of Applied Communication Research*, 37(3), 225-238.

- Walther, J. B., & Carr, C. T. (2010). Internet interaction and intergroup dynamics. In H. Giles, S. Reid & J. Harwood (Eds.), *The Dynamics of Intergroup Communication* (pp. 209-220). Nueva York: Peter Lang.
- Walther, J. B., & D'Addario, K. P. (2001). The impact of emoticons on message interpretation in computer-mediated communication. *Social Science Computer Review*, *19*, 324–347.
- Wang, Z., Walther, J. B., & Hancock, J. T. (2009). Social identification and interpersonal communication in computer-mediated communication: What you do versus who you are in virtual groups. *Human Communication Research*, *35*, 59-85.
- Weisband, S. P., Schneider, S. K., & Conolly, T. (1995). Computer-mediated communication and social information: Status salience and status differences. *Academy of Management Journal*, *38*(4), 1124-1151.
- Wilder, D. A. (1984). Intergroup contact: the typical member and the exception to the rule. *Journal of Experimental Social Psychology*, *20*, 177–194.
- Wilder, D. A., Simon, A. F., & Faith, M. (1996). Enhancing the impact of counterstereotypic information: Dispositional attributions for deviance. *Journal of Personality and Social Psychology*, *71*, 276–287.
- Wolsko, C., Park, B., Judd, C., & Bachelor, J. (2003). Intergroup contact: Effects on group evaluations and perceived variability. *Group Processes & Intergroup Relations*, *6* (1), 93-110.
- Wright, S. C., Aron, A., & Brody, S. M. (2008). Extended contact and including others in the self: Building on the Allport/Pettigrew legacy. In U. Wagner, L. R. Tropp, G. Finchilescu, & C. Tredoux (Eds.), *Improving intergroup relations: Building on the legacy of Thomas F. Pettigrew* (pp. 143–159). Malden, MA: Blackwell Publishing.